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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/574,341	05/20/2000	NICHOLAS A. LANGRIND	102689-6	8716

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EXAMINER	
PATEL, NITIN C	

ART UNIT	PAPER NUMBER
2116	

DATE MAILED: 06/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/574,341	LANGRIND ET AL.	
	Examiner	Art Unit	
	Nitin C. Patel	2116	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 May 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-30* is/are pending in the application.

4a) Of the above claim(s) *25* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24 and 26-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *13 November 2000* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This is in responsive to request for continued examination [RCE] filed on 16 May 2005.

2. Claim 25 has been cancelled.

3. Claim 30 has been added new.

Claim Objections

4. In the claim 1, replace "the device" in line 5 on page 2 with ---the network device--- as device has not previously recited in the claim.

5. In the claim 30, replace "the cross-connection card" in line 1-2 on page 5 with ---the cross-connection switch--- as cross-connection card has not previously recited in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000.

Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

6. Claim 1 – 3, 5 – 6, 18 – 19, 20 – 24, and 27 – 30, are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Elliot et al. [hereinafter as Elliot], US Patent 6,587,470 [cited by examiner in previous office action].

7. As to claims 1, Elliot teaches a network interface subsystem and method of establishing a path for data transmission in a network device [fig. 4b] having a plurality of port cards [400, 420, network interface cards], a plurality of forwarding cards [I/O line cards] and cross-connection card [XC-card] for providing a plurality of possible paths between the port cards and the forwarding cards [I/O line cards], the method comprising:

a. defining configuration policy [routing policy] designating internal connection path [cross-connect matrix]; and

b. utilizing said configuration policy [routing policy] to configure said cross-connection card for establishing internal connection paths between the port cards and the forwarding cards for transmitting packetized payload data there between [abstract, col. 3, lines 32 – 59, col. 4, lines 13 – 65, col. 7, lines 4 – 23, 25 – 67, col. 9, lines 42 – 65, col. 10, lines 15 – 28, col. 11, lines 65 – 67, col. 12, lines 1 – 3, fig. 3, 4, 5].

8. As to claim 6, Elliot discloses a network interface subsystem and method of establishing a path for data transmission in a network device [fig. 4b] method of establishing a path for data transmissions having a plurality of possible paths [interconnections] through a cross-connection card [XC-card, fig. 3] comprising:

a. establishing internal connection paths through the cross-connection card [XC-card] based upon a configuration policy [cross-connect switch matrix] [abstract, col. 2, lines 32 – 67, col. 3, lines 13 – 29, 50 – 65, col. 9, lines 35 – 67, col.10, lines 1 - 28 fig. 3].

9. As to claim 23, Elliot teaches a computer network device [telecommunications cross-connect apparatus], comprising:

a. a cross-connection card [440, XC card] comprising a plurality of programmable paths internal to said device [col. 3, lines 50 – 65];

b. a plurality of forwarding cards including a plurality of ports coupled to the cross- connection card [fig. 2, 3, and 5];

c. a plurality of physical cards including a plurality of ports coupled to the cross-connection card [fig. 4b, 5];

d. a configuration policy file stored [stored in Flash, 560] within the computer device; and

e. a policy provisioning manager [1110, provisioning manager] for programming the plurality of programmable paths using the configuration policy file, wherein the plurality of the programmable paths connect ports of the forwarding cards with particular ports of the physical cards through the cross-connection card [abstract, col. 3, lines 32 – 59, col. 4, lines 13 – 65, col. 7, lines 4 – 23, 25 – 67, col. 9, lines 42 – 65, col. 10, lines 15 – 28, col. 11, lines 65 – 67, col. 12, lines 1 – 3, col. 14, lines 51 – 67, col. 15, lines 14 – 67, col. 16, lines 1 – 25, fig. 3, 4, 5].

10. As to claim 29, Elliot discloses a network device [telecommunications cross-connect apparatus] comprising at least one port for receiving data from an external device, a plurality of forwarding systems for processing the received data and a cross-connection switch [XC switch matrix] for coupling the port to the forwarding system, a method of establishing a path between said port and at least one of said forwarding systems [col. 7, lines 25 – 67, fig. 5], comprising:

a. defining a configuration policy [routing policy] for designating said port to at least one of said forwarding systems, and

b. utilizing said configuration policy [routing policy] to establish an internal connection path between said port and said at least one of said forwarding systems through the cross-connection switch [XC switch matrix][abstract, col. 3, lines 32 – 59, col. 4, lines 13 – 65, col. 7, lines 4 – 23, 25 – 67, col. 9, lines 42 – 65, col. 10, lines 15 – 28, col. 11, lines 65 – 67, col. 12, lines 1 – 3, col. 14, lines 51 – 67, col. 15, lines 14 – 67, col. 16, lines 1 – 25, fig. 3, 4, 5].

11. As to claims 2, 3, 18, 19, and 28, Elliot discloses to store the configuration file within a configuration database [1142, data base] within the network device [telecommunication cross-connect apparatus] [col. 14, lines 51 – 67, col. 15, lines 14 – 16, and 42 – 44, fig. 11].

12. As to claims 5, and 21, Elliot discloses changing established internal connection paths through the network device based upon a configuration policy [failure protect] and changing resource needs [col. 3, lines 50 – 65].

13. As to claim 7, Elliot teaches to apply configuration policy [establishing connection] based on available device resources and needs at a time [when interface cards failed] [col. 3, lines 50 – 65].

14. As to claim 16, Elliot discloses storing the configuration table settings in persistent storage [1182, software storage] to ensure the configuration settings are maintained in the event of a system shut down [col. 15, lines 42 – 48, fig. 11].

15. As to claims 17, 22, and 24, Elliot discloses that the device comprises a router [632, message router] [col. 10, lines 67, col. 11, lines 1 – 18, col. 12, lines 41 – 43].

16. As to claim 27, Elliot discloses software architecture including a provisioning manager [1110] and managing the provisioning database for system via link manager [1120] to address network interface cards and inter-card communications module [col. 14, lines 35 – 67, col. 15, lines 24, fig. 11].

17. As to claim 30, Elliot discloses the configuration policy causes cross- connection card [XC -card] to establish said internal connection path regardless of information contained in the payload [col. 3, lines 22 – 36].

18. Claim 6, is rejected under 35 U.S.C. 102(e) as being clearly anticipated by Ganmukhi et al. [hereinafter as Ganmukhi], US Patent 5,953,314 [cited in IDS by applicant].

19. As to claim 6, Ganmukhi discloses a method of establishing a path for data transmissions in a network device [10, telecommunication switch] having a plurality of possible paths [interconnections] through a cross-connection card [16, switch fabric card] comprising:

a. establishing internal connection paths [physical connection] through the cross-connection card [16] based upon a configuration policy [configuration functionality] [col. 1, lines 50 – 59, col. 2, lines 38 – 65, fig. 1].

20. Claims 1, 6, and 29, are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Zheng et al. [hereinafter as Zheng], US Patent 6,611,522.

21. As to claims 1, 6, and 29, Zheng discloses a method of establishing a path for data transmissions in a network device having a plurality of possible paths [22, line cards] through a cross-connection card [24, interconnect module card] comprising [col. 3, lines 23 – 38]:

a. establishing internal connection paths [switching and routing] through the cross-connection card [24] based upon a configuration policy [QoS provides policy functions] [col. 2, lines 47 – 65, col. 3, lines 23 – 67, col. 4, lines 1 - 29,col. 9, lines 1 – 7, 31 – 67, col. 10, lines 1 – 45, 59 – 64, col. 11, lines 57 – 65, col. 12, lines 1 – 13, fig. 2, 4, and 7].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

22. Claims 4, 7 – 15, 20 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Elliot et al. [hereinafter as Elliot], US Patent 6,587,470 [cited by examiner in previous office action] as applied to claims 1,6, 23, and 29 above, and further in view of Rao, Us Patent 6,789,118 B1 [cited in previous office action].

23. As to claims 4, and 20, Elliot teaches a network interface subsystem and method of establishing a path for data transmission in a network device [fig. 4b] having a plurality of port cards [400, 420, network interface cards], a plurality of forwarding cards [I/O line cards] and cross-connection card [XC-card] for providing a plurality of possible paths between the port cards and the forwarding cards [I/O line cards], ther method comprising: defining configuration policy [routing policy] designating internal connection path [cross-connect matrix]; and utilizing said configuration policy [routing policy] to configure said cross-connection card for establishing internal connection paths between the port cards and the forwarding cards for transmitting packetized payload data there between [abstract, col. 3, lines 32 – 59, col. 4, lines 13 – 65, col. 7, lines 4 – 23, 25 – 67, col. 9, lines 42 – 65, col. 10, lines 15 – 28, col. 11, lines 65 – 67, col. 12, lines 1 – 3, fig. 3, 4, 5].

However Elliot does not teach to change the configuration policy dynamically within the system while the network device continues to operate.

Rao discloses a system method of establishing a path for data transmissions in a network device [multi-service network switch] having a plurality of possible paths [multi-service network switch with policy based routing] including defining a configuration policy designating internal connection paths within the device [col. 19, lines 20 - 67, col. 20, lines 1 - 59, col. 23, lines 28 - 65, col. 24, lines 1 - 30, col. 26, lines 66 - 67, 01. 27, lines 1 - 21, 01. 11, lines 21 – 48], and; configuration policy dynamically changed [dynamic configuration] within the system while the network device [multi-service switching continues to operate] [col. 10, lines 43 - 52, col. 23, lines 28 - 67, col. 24, lines 1 – 6].

It would have been obvious to one of ordinary skill in art, having the teachings of Elliot and Rao before him at the time of invention was made, to modify the software architecture of telecommunication apparatus as disclosed by Elliot to include a configuration policy dynamically changed [dynamic configuration] within the system while the network device [multi-service switching continues to operate] [col. 10, lines 43 - 52, col. 23, lines 28 - 67, col. 24, lines 1 – 6] as taught by Rao, in order to obtain a network switch capable of providing a fault tolerant and efficient services that will accommodate the increase in the number and variety of network traffic [col. 2, lines 1 – 7].

24. As to claim 7, Rao discloses applying the configuration policy based on available resources and needs at a given time [col. 16, lines 29 – 53].

25. As to claims 8 - 10, Rao discloses creating a table in configuration database to provide connection information to the device [col. 19, lines 20 - 30, 39 - 67, col. 20, lines 1 – 59].

26. As to claim 11, Rao teaches establishing a partial record in a service end point table when user connects to a particular port on a universal port card in system [col. 23, lines 28 - 67, col. 24, lines 1 – 57].

27. As to claims 12, and 26, Rao teaches sending a notification based on partial record [whenever a port's state changes] to a policy provisioning manager [col. 24, lines 35 – 67].

28. As to claim 13, Rao discloses a connection policy based on a comparison of at least one new path characteristic with available resources on a forwarding card [col. 18, lines 5 - 62, col. 20, 1 - 18, col. 19, lines 39 - 62, col. 20, lines 34 - 59].

29. As to claims 14 - 15, Rao discloses a multi-service network switch with allocation of slot number, port number and ability to partition the switch into multiple virtual routers [VRs] and virtual private networks [VPNS] and resource management with efficient provisioning of VRs therefore he teaches necessary step of comparison too [col. 12, lines 55 - 65, col. 19, lines 20 - 67, col. 20, lines 1 – 60].

30. **Examiner's note**: Examiner has cited particular columns and line numbers in the references as applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing

responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

31. **Prior Art not relied upon**: Please refer to the references listed in attached PTO-892, which, are not relied upon for claim rejection since these references are relevant to the claimed invention.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nitin C. Patel whose telephone number is 571-272-3675. The examiner can normally be reached on 6:45 am - 5:15 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne H. Browne can be reached on 571-272-3670. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nitin C. Patel
June 20, 2005

LYNNE H. BROWNE
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